

spray is more economical than other larvicides used, both as to the material cost and man-hours required to treat a given area.—W. V. MATHIS.

17983 Ca

THE CONTROL OF RAT ECTOPARASITES WITH DDT. Russell G. Ludwig and H. Page Nicholson. (U.S.P.H.S., Communicable Disease Center, Technical Development Division, Savannah, Ga.) Pub. Health Rep. 62(3):77-84. 8 fig. 1947. (Abstract.)

Field studies to determine the effectiveness of a 10 per cent DDT, 90 per cent pyrophyllite dust mixture for rat ectoparasite control and to develop equipment and methods for its application were undertaken at Savannah, Georgia, in 1945. Extensive inspections were made and representative establishments having heavy infestations of rats and their ectoparasites were chosen for check and treatment, previous care being used to have similar types of buildings in each group. Live trapping was carried out in all buildings before treatment and at intervals after treatment to establish ectoparasite indices and the normal variation of ectoparasite populations so the results of treatment could be evaluated. Treatment was effected by blowing the 10 per cent DDT dust into burrows and enclosed harborages with a cyanogas foot pump duster, and by applying a layer of dust, with hand shaker dusters, along runways and around holes where it would be picked up by the rats and carried to nests and harborage areas. An average of 8 pounds of dust was used for each establishment. Of the 10 species of ectoparasites found on rats in Savannah, only *X. cheopis* was found in sufficient numbers and uniformity of distribution to permit an analysis of seasonal population variations. Consistent control of *X. cheopis* was obtained in all establishments with control percentages dropping off from an initial of 99.3 per cent by approximately 5 per cent per month for 4 months following treatment.—C. M. TARZWELL.

0737 Ca

THE CONTROL OF HOUSE FLIES BY DDT SPRAYS. W. C. Baker, H. I. Scudder, and E. L. Guy. (U.S.P.H.S., Communicable Disease Center, Technical Development Division, Savannah, Ga.) Pub. Health Rep., Vol. 62(17):597-612. 1947. (Abstract.)

Effective control of *Musca domestica* for a period of 3 months was obtained in dairies by spraying both barns and outbuildings with a xylene-Triton X-100 emulsion containing 2½ per cent DDT applied at the rate of 200 mg. DDT per square foot. A suspension of water-wettable DDT powder gave comparable results. Under poor sanitary conditions treatment of barn or outbuildings only was unsatisfactory. In restaurants effective control for 3 months or more was obtained by spraying ceilings and walls of dining room and kitchen with an emulsion containing 7½ per cent DDT and applied at the rate of 200 mg. DDT per square foot. In small food and ice-cream shops, 40-60 ft. of DDT-impregnated cord was hung as a re-

placement for electric light pull cords, along the chains of suspended display shelves, and from the kitchen ceiling at locations where the string would not interfere with the employees. Good control was obtained when the fly influx was not excessive. Emulsions containing ½ per cent DDT when applied at the rate of 300 and 200 mg. per square foot as a cover spray gave effective control for 3 weeks of adults emerging from grain wastes and from garbage washings in an alley. When nearby adult resting places were also treated, the control period was lengthened considerably.—W. C. BAKER.

9413 Ca

EXTENDED LABORATORY INVESTIGATIONS OF THE TOXICITY OF DDT RESIDUES TO ADULTS OF *Anopheles quadrimaculatus*. R. W. Fay, S. W. Simmons, and J. M. Clapp. (U.S.P.H.S., Communicable Disease Center, Technical Development Division, Savannah, Ga.) Pub. Health Rep. 62(5):149-158. 1947. (Abstract.)

The residual toxicity of DDT to adult female *A. quadrimaculatus* mosquitoes is lost more rapidly at short exposure periods, i.e. 30 minutes, than at long exposure periods, i.e. 180 minutes. The loss of residual toxicity does not follow a single straight line relationship, but occurs more rapidly during the first 16 weeks and then shows little change for the next 6 months. Direct comparisons of mortalities show the 200 mg. DDT per sq. ft. deposits after 16 weeks to be about equal to the 100 mg. DDT per sq. ft. deposits after 12 weeks. The knock-down rate at the end of 60 min. exposures was a good indication of the 48 hr. mortality. There are indications that DDT in slow volatilizing solvents does not show as marked loss of residual in the first 12 weeks of aging as it does in fast volatilizing solvents. The male mosquitoes are more susceptible to DDT than the female adults.—R. W. FAY.

5788

NOTES ON THE ANOPHELINES OF VENEZUELA AND THEIR IDENTIFICATION. By Pablo Cova Garcia. XII. Conferencia Sanitaria Panamericana, Cuadernos Amarillos No. 1. Publicacion de la Comision Organizadora. 208 pp., 52 unnumbered plates, 42 figs. Editorial Grafolit, Caracas, Venezuela. 1946.

Of the several regional treatments of the Anopheline mosquitoes that have appeared in the past few years, this is one of the best. It combines the best features of a taxonomic and faunistic treatise on the 30 species of Anophelini of Venezuela, with a well-conceived laboratory manual to train public health personnel and students of medical entomology in the identification and handling of these mosquitoes.

The book is very well organized. The eggs, larvae, pupae, adults, and male genitalia are each treated in separate sections, in this order. For the larvae and adults there is a discussion of the morphology and of the biology, followed by a laboratory guide to show students the essential characters necessary for the determina-